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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,624	10/09/2001	Lee J. Rosen	3047-7434	6243
21888	7590	03/26/2004	EXAMINER	
THOMPSON COBURN, LLP ONE US BANK PLAZA SUITE 3500 ST LOUIS, MO 63101			MAI, NGOCLAN THI	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 03/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/973,624	<b>Applicant(s)</b> ROSEN ET AL.	
	<b>Examiner</b> Ngoclan T. Mai	<b>Art Unit</b> 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-28, 55-70 and 80-100 is/are pending in the application.
- 4a) Of the above claim(s) 21-24, 61-64 and 94-97 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 2-20 and 25-27, 55-60, 65-70 is/are allowed.
- 6) ☒ Claim(s) 28, 80, 82, 83, 88-91, 93 and 98-100 is/are rejected.
- 7) ☒ Claim(s) 81, 84-87 and 92 is/are objected to.
- 8) ☒ Claim(s) 2-28, 55-70 and 80-100 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### **Status of the claims**

1. Claims 1, 29-54, 71-79 have been cancelled. Due to the election of species in paper no. 6, claims 21-24, 61-64 as well as new claims 94, 95, 96, and 97, which are drawn to non-elected species have been withdrawn from further consideration

Accordingly, claims 2-20, 25-28, 55-60, 65-70, 80-93, and 98-100 are remained for consideration.

2. The indication of claim 28 being objected to as being dependent upon a rejected base claim is withdrawn because the only difference between this claim and the original claim 1 is that this claim recites the primary particles having an average size in a range of about 1 to 100 nanometers, which is a narrower range of the primary particles as compared to the original claim 1. Since the original claim 1 was rejected as being anticipated by Bhagat for the reason given in paragraph 5 of the previous office action, claim 28 should also be rejected for the same reason.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102***

4. Claims 28, 80, 82, and 83 are rejected under 35 U.S.C. 102(e) as being anticipated by Bhagat.

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Bhagat disclosed a cemented carbide powders having nanograined structure comprising agglomerated particles containing WC grains on the nanograin scale in a Co matrix, see col. 3, lines 28-38. Note that nanograin scale is well known in the art for having size of less than 100 nm. Also note that the teaching of WC grain in Co matrix implies that Co encapsulates the WC grains.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 28, 80, 82, 88-91, 93, and 98-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf et al.

Wolf et al disclosed a tantalum agglomerate powder having specific surface area ranging from 1.4 to 3 m<sup>2</sup>/g, a metal contaminant such as sodium less than 50 ppm and primary grain diameter of 100 to 400 nm. See claims 1, 3 and 4.

The difference between the claim and that of Wolf et al. is that the claim recites primary particle size of 1 to 100 nm.

Since Wolf et al teach the powder with primary particles whose size ranges overlap that recited by the claims; such overlapping primary particle size range renders

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applicant's composition prima facie obvious despite difference in non-overlapping areas, see *In re Malagari*, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974).

7. Claims 81, 84-87 and 92 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 2-20, 25-27, 55-60 and 65-70 are allowable.


9. The examiner has considered the IDS filed by the applicants on July 1, 2003. The examiner finds that none of the references cited as X references in the international search report discloses or makes obvious the claimed invention.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 7:30-4:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ngoclan T. Mai  
Primary Examiner  
Art Unit 1742

n.m.